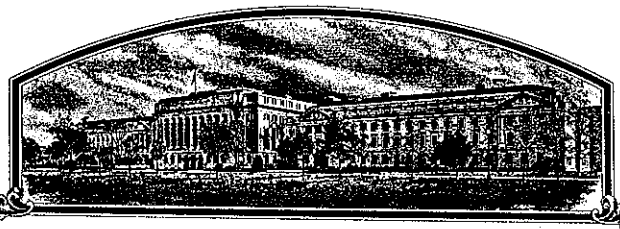
No. 8800121



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

The Ohio State University Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS REQUIRED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'GR876'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D. C. *this* 31st *day of* March *in the year of our Lord one thousand nine hundred and* eighty-nine.

Attest:

Kenneth R. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Clayton Yeutter
Secretary of Agriculture

APPROVAL EXPIRES 2-28-88

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
The Ohio State University, Ohio Agricultural Research and Development Center	OH 257	GR876

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*	FOR OFFICIAL USE ONLY
1680 Madison Avenue Wooster, OH 44691	216-263-3700	PVPO NUMBER 8800121

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*	FILING
Triticum aestivum L.	Graminae	DATE: April 11, 1988 TIME: 9:30 [X] A.M. [ ] P.M.

8. KIND NAME	9. DATE OF DETERMINATION	FEES RECEIVED
Soft Red Winter Wheat	9/12/86	AMOUNT FOR FILING: $ 1800 00 DATE: April 11 1988 AMOUNT FOR CERTIFICATE: $ 200 00 DATE: Feb. 9, 1989

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*

Agricultural Experiment Station

11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Dr. H. N. Lafever
Agronomy Department
The Ohio State University, Ohio Agricultural Research and Development Center
Wooster, OH 44691
PHONE *(Include area code)*: 216-263-3886

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. [X] Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety *(Request form from Plant Variety Protection Office.)*
d. [X] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* [X] Yes *(If "Yes," answer items 16 and 17 below)* [ ] No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] Yes [ ] No	[X] Foundation [ ] Registered [X] Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

[ ] Yes *(If "Yes," give date)*
[X] No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES ?

U.S., September, 1987 (Sold as Foundation generation seed to producers of Certified class seed.)

[X] Yes *(If "Yes," give names of countries and dates)*
[ ] No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
Howard N. Lafever (Breeder)	2-16-88
SIGNATURE OF APPLICANT Jack M. Hollander, Vice President for Research & Graduate Studies	DATE 4/1/88

FORM LS-470 (3-86) *Edition of 7-84 obsolete.*

Exhibit A

Origin and Breeding History of the Variety

1. GR876 (previously designated as OH257) originated at The Ohio State University, Ohio Agricultural Research and Development Center from the complex cross: Hart/Va. 66-54-10//Kavkaz/Pur 6693. The final cross was made in 1973 and designated 12673. GR876 was first selected in 1976 as an F_3 plant and designated as 12673-17. It was reselected in 1980 in the F_7 generation as described below.

2. Breeder seed of GR876 consists of the progeny of 16 F_7 plants selected for uniformity in 1981-85 and bulked after the 1985 harvest to constitute Breeder seed. Breeder seed was harvested in 1986. Foundation generation seed was produced in 1987 with the first distribution of Foundation generation seed made in the fall of 1987 to producers of the Certified class of seed.

3. GR876 appears to be very uniform and homozygous as observed in the field over the past seven years. This would be expected of the progeny of phenotypically identical plants selected in the F_7 and reexamined for uniformity in the F_8 through the F_{12} generations. (Originally 80 F_7 plants were selected as being identical in the F_7 generation, however, continued observation for uniformity in the F_8 through F_{12} generations resulted in the progeny of only 16 of these being bulked after harvest of the F_{12} generation in 1985.)

4. GR876 appears to be very stable and true breeding as evidenced by agronomic and pathological examination of the F_8 through the F_{12} generations in special purification and increase nurseries.

5. Variants observed during the development of the variety were few in number and of various, non-repeating types. In the 1987 Foundation generation production fields some off-types were observed including awnless types, semi-awned types, and height variants.

   The total of all such off types did not exceed .4%.

   Roguing of all observed off-types was performed three times in the Breeder seed increase of 1986 and three times in the Foundation generation increase of 1987.

   Criteria for selection during the multiplication and purification process in the F_8 through F_{12} generations allowed no variance from complete uniformity. If one off-type plant was observed in an increase row, that plant was either rogued or the entire row was dropped from further increase. If two or more off-type plants were observed within a row, the row was eliminated from further increase.

6. The variety was selected primarily for high yielding ability and excellent disease resistance. Additionally, selection for all other important agronomic, pathologic, and quality traits were exercised. The variety was selected in comparison to popular varieties in Ohio, namely, Becker, Caldwell, Cardinal, Hart, Titan, and Tyler.

8800121

Exhibit B (Revised)

Novelty Statement and Botanical Description of the Variety

GR 876 is an awned, white chaffed variety with purple auricles prior to maturation. It has large heads and large kernels. The variety is moderately short, averaging about 2.5 cm shorter than Cardinal and 5 cm shorter than Titan, but 10 cm taller than Becker. It is moderately late in maturity, heading about 2 days later than Becker and approximately one day earlier than Titan. Straw strength of the variety is excellent, approximately equal to that of Becker. Winterhardiness of GR 876 is also excellent. The test weight of GR 876 is excellent, exceeding all check varieties.

The U.S.D.A. Soft Wheat Quality Laboratory, Wooster, Ohio, in evaluations of samples of GR 876 has found it to possess very good milling quality and acceptable baking quality.

GR 876 possesses excellent field resistance to leaf rust, stem rust, powdery mildew, and wheat spindle streak mosaic virus (WSSM). GR 876 also possesses resistance to races GP, A, C, and F of Hessian fly.

GR 876 most closely resembles Hart, but is distinguishable from it on the basis of different disease resistances, maturity, and the presence of purple auricles. Specifically, GR 876 appears to be extremely resistant to field races of powdery mildew (Erysiphe graminis) and very resistant to leaf rust (Pucinia recondita) in tests over a 6 and 4 year period, respectively, at various Ohio locations while Hart appeared very susceptible to both diseases (see Table 4, "Comparative performance of OH 257 and OH 265 with currently grown varieties in miscellaneous Ohio tests"). Average percent of leaf area infected with powdery mildew and leaf rust were 0 and 2, respectively, for GR 876, while Hart averaged 68 and 47, respectively. Heading date for Hart averaged 3.5 days earlier than that of GR 876 in 29 tests over 5 years (see Table 3, "Comparative performance of OH 257 and OH 265 with currently grown varieties in drilled plot trials, Ohio, 1982-1986").

Table 1. Comparative yields of OH 257 and OH 265 with currently grown varieties in drilled plot trials by years, Ohio.

Line or Variety	1981 3 tests	1982 3 tests	1983 7 tests	1984 6 tests	1985 6 tests	1986 7 tests	Avg. 29 tests	Avg. 32 tests
Becker	57.3	66.3	63.5	56.5	83.3	58.2	65.2	64.4
Caldwell	58.6	60.9	--	--	--	55.2	--	--
Cardinal	60.6	64.9	64.3	63.5	84.0	56.6	66.4	65.9
GR 863	54.1	68.0	60.3	58.0	85.2	51.8	63.7	62.8
Hart	56.4	68.9	57.7	55.3	78.3[1]	56.2	62.3	61.7
Titan	58.0	62.3	60.1	51.3	77.9	55.9	61.2	60.9
Tyler	--	70.2	64.2	57.5	75.3	57.9	64.2	--
OH 257	55.0	62.8	62.0	60.3	81.3	62.7	65.9	64.9
OH 265	--	69.9	61.3	60.8	83.2	58.6	66.0	--

[1] No 1985 data. Yields adjusted based on relative performance in other years.

Table 2. Comparative yields of OH 257 and OH 265 with currently grown varieties in drilled plot trials by locations, Ohio.

Line or Variety	OARDC 1982-86	N.W.Br. 1982-86	W.Br. 1982-86	Mah. Co. 1983-86	S.Br. 1983-86	OFS 1983,86	Vg.Cr.Br. 1983-86	Avg. (29 tests)
Becker	67.2	76.9	55.0	54.2	54.6	57.6	86.1	65.2
Cardinal	68.2	83.1	53.6	54.5	56.9	58.6	84.9	66.4
GR 863	64.9	79.6	51.5	54.4	52.5	55.4	82.5	63.7
Hart[1]	62.5	75.4	50.7	53.0	52.7	58.6	80.7	62.3
Titan	61.9	69.7	49.9	56.5	50.7	57.8	80.8	61.2
Tyler	69.5	78.7	49.8	54.3	48.7	59.4	85.4	64.2
OH 257	66.8	79.2	50.2	56.1	58.1	66.3	85.1	65.9
OH 265	69.2	83.4	56.1	50.9	51.8	61.6	83.7	66.0

1 No 1985 data. Yields adjusted based on relative performance in other years.

Table 3. Comparative performance of OH 257 and OH 265 with currently grown varieties in drilled plot trials, Ohio, 1982-1986. (Average of 29 tests.)

Line or Variety	Winter Survival (%)	Pl. Height (in.)	Date Headed (May)	Lodging (%)	Test ⚖. (lb/bu)
Becker	95	31	24.7	2	56.2
Cardinal	96	36	25.1	3	57.8
GR 863	95	31	21.1	0	56.7
Hart[1]	96	36	23.3	3	58.2
Titan	93	37	27.5	13	57.2
Tyler	96	38	24.4	7	57.2
OH 257	95	35	26.8	2	58.6
OH 265	97	35	23.8	3	58.0

1 No 1985 data. Averages adjusted based on relative performance in remaining years.

Table 4. Comparative performance of OH 257 and OH 265 with currently grown varieties in miscellaneous Ohio tests.

Line or Variety	H.F. Res.	% Mildew 14 tests- 6 yrs	WSSM[2] 5 tests- 4 yrs	Leaf Rust 10 tests- 4 yrs	Al tolerance Yield (% of Seneca) 4 yrs	Al tolerance Visual score[3] 6 yrs	Quality (5 yrs) Milling	Quality (5 yrs) Baking
Becker	A,C	67	1	6 MR	69	4	B-	B+
Cardinal	A,C,	30	1	tr VR	99	4	A+	A
GR 863	A,C,	2	2	8 R	75	4	B-	D-
Hart[1]	A,C,	68	1	47 S	36	8	C	E+
Titan	A,C,	26	2	14 MR	75	4	B-	E+
Tyler	None	1	1	50 S	--	3	A	E+
OH 257	A,C,	0	1	2 VR	81	3	B	E
OH 265	None	15	1	4 VR	65	6	A-	C

1 No 1985 data. Averages adjusted based on relative performance in remaining tests.
2 0 = none to 9 = severe.
3 0 = very tolerant to 9 = tolerant.

Table 5. Results of state-wide drilled plot yield trials including Ohio advanced wheat lines, 1987. (In order by average yield in 6 tests.)

Entry	Yield (bu/A) OARDC (Wooster)	N.Western Br. (Custar)	Western Br.(S. (Cha'ston)	Mahoning Co. Farm (Canfield)	Veg.Crops Br. (Fremont)	Southern Br. (Ripley)	Avg. Yield 6 Tests	Avg. Survival (%)	Avg.Date Headed (May)	Avg. Pl.Ht. (in.)	Avg. Lodg. (%)	Avg. Leaf Rust[1]	Avg. Test Wt. (lb/bu)
GR876	76.8	68.0	76.8	50.0	89.7	47.1	68.1	96	26	32	7	2VR	57.0
OH 374	75.9	70.8	80.6	42.4	84.1	46.6	66.7	95	26	33	9	1R	56.3
Dynasty	70.4	76.2	77.2	51.7	73.0	42.8	65.2	97	23	35	19	3VR	56.3
Becker	73.3	77.0	80.7	50.6	61.6	44.5	64.6	97	25	31	6	13MR	54.9
Cardinal	71.7	70.2	79.0	52.2	70.0	44.0	64.5	95	24	36	17	2MR	55.6
OH 375	73.4	64.3	74.6	46.0	83.4	45.1	64.5	92	26	33	10	1R	56.2
OH 394	72.3	69.6	71.5	51.3	75.1	45.2	64.2	96	25	30	12	2R	54.7
OH 331	69.7	65.9	74.2	42.7	86.8	45.5	64.1	95	23	34	9	2MR	55.3
OH 286	70.3	67.4	77.6	50.1	72.6	41.9	63.3	96	24	33	9	1R	53.9
Tyler	71.7	56.9	81.5	46.2	72.9	36.5	61.0	96	24	37	29	50S	55.6
Caldwell	66.1	67.2	76.6	45.3	63.8	41.8	60.1	95	22	34	35	1R	56.2
OH 337	67.5	49.0	70.3	49.2	79.5	43.5	59.8	95	24	34	2	11MR	53.6
Titan	71.3	63.7	72.2	48.4	54.4	37.2	57.9	95	26	37	36	11MS	54.6
OH 328	61.6	42.6	73.4	49.4	69.9	42.8	56.6	96	24	32	26	8MS	55.3
OH 285	66.6	32.5	78.2	47.5	74.8	39.2	56.5	95	23	38	8	1VR	56.7
OH 336	66.1	27.1	69.1	39.5	64.2	44.5	51.8	94	22	34	16	3MS	55.1
$\bar{x}$	70.3	60.5	75.8	47.7	73.5	43.0	61.8	95	24	34	16	--	55.5
5% L.S.D.	3.3	4.1	3.4	6.8	5.5	4.1							

[1] % - class (VR = very resistant, R = resistant, MR = mod. resistant, MS = mod. susceptible, S = susceptible). Data shown is average for Wooster and Ripley, the only locations with leaf rust in 1987.

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Wheat)

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S): The Ohio State University, Ohio Agricultural Research and Development Center

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*):
1680 Madison Avenue
Wooster, OH 44691

FOR OFFICIAL USE ONLY

PVPO NUMBER: 8800121

VARIETY NAME OR TEMPORARY DESIGNATION: GR876

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:

[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

[2] 1 = SPRING 2 = WINTER 3 = OTHER (*Specify*) _____

[1] 1 = SOFT 2 = HARD 3 = OTHER (*Specify*) _____

[2] 1 = WHITE 2 = RED 3 = OTHER (*Specify*) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

[2][2][9] FIRST FLOWERING

[2][3][5] LAST FLOWERING

4. MATURITY (*50% Flowering*):

[ ][.] NO. OF DAYS *EARLIER* THAN .....

[ ][7] NO. OF DAYS *LATER* THAN .....

[ ] [1] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (*From soil level to top of head*):

[ ][8][8] CM. HIGH

[ ][ ] CM. TALLER THAN .....

[ ][3] CM. SHORTER THAN .....

[ ] [1] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (*See reverse*):

[3] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

8. STEM:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom: 1 = ABSENT 2 = PRESENT

[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

[1] Internodes: 1 = HOLLOW 2 = SOLID

[ ][4] NO. OF NODES (*Originating from node above ground*)

[2][7] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (*Specify*): _____

[1] Flag leaf: 1 = NOT TWISTED 2 = TWISTED

[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

[1][3] MM. LEAF WIDTH (*First leaf below flag leaf*)

[3][0] CM. LEAF LENGTH (*First leaf below flag leaf*):

11. HEAD:

[1] Density: 1 = LAX 2 = DENSE

[1] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER *(Specify)* _____

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER *(Specify)*: _____

[1][0] CM. LENGTH

[1][0] MM. WIDTH

12. GLUMES AT MATURITY:

[2] Length: 1 = SHORT *(CA. 7 mm.)* 2 = MEDIUM *(CA. 8 mm.)* 3 = LONG *(CA. 9 mm.)*

[3] Width: 1 = NARROW *(CA. 3 mm.)* 2 = MEDIUM *(CA. 3.5 mm.)* 3 = WIDE *(CA. 4 mm.)*

[2] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[1] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[1] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

2 [3] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[5] Phenol reaction *(See instructions)*: 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER *(Specify)* _____

[7] MM. LENGTH

[3 ½] MM. WIDTH

[3][6] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[2] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[2] STEM RUST *(Races)* (field)

[2] LEAF RUST *(Races)* (field)

[0] STRIPE RUST *(Races)* _____

[2] LOOSE SMUT

[2] POWDERY MILDEW

[0] BUNT

[2] OTHER *(Specify)* WSSM virus

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[0] APHID *(Bydv.)*

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER *(Specify)* _____

HESSIAN FLY RACES: [2] GP [2] A [1] B [2] C [1] D [1] E [2] F [1] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Titan	Seed size	Titan
Leaf size	Ruler	Seed shape	Becker
Leaf color	Ruler	Coleoptile elongation	GR863
Leaf carriage	GR863	Seedling pigmentation	Numerous

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. *(See attachment.)*

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

Exhibit D

Additional Description of the Variety

Plant color at booting is best classified as blue green (Item 6, Exhibit C), however, it is more accurately described as dark green.

Hairlines of auricles is best classified as present (Item 9, Exhibit C), however, usually only a few short hairs are present.

The flag leaf is best classified as not twisted (Item 10, Exhibit C), however, often slight twisting is observed.

Heads of GR876 are best classified as dense (Item 11, Exhibit C), however, they are more accurately described as intermediate in density.

Stems of GR876 are very thick walled, however, the variety is still classed as a hollow stemmed variety.

Quality Evaluation of GR876
(Data taken from U.S.D.A. Soft Wheat Quality Laboratory Reports)

Soft wheat quality tests of composite samples of 9 lines and varieties grown at 7 locations in 1986 in Ohio revealed GR876 received a combined quality score of 69.7. Comparative scores for Becker, Caldwell, Cardinal, and Titan were 82.4, 100, 81.2, and 69.7, respectively.

In evaluations of composite samples of 32 lines and varieties grown at seven locations in the Eastern U.S. in 1986 in the Uniform Eastern Nursery, GR876 received a combined quality score of 93.7 and an overall grade of C. Comparative scores for Knox 62, Oasis and Trumbull were 100, 95.2 and 84.1, respectively.

The average overall milling grade for GR876 in evaluations of composite samples taken from three to seven locations in Ohio each year over a period of 5 years was B, while the average overall baking grade was E. Comparative milling grades for other varieties in these same nurseries were B-, A+, C, and B- for Becker, Cardinal, Hart and Titan, respectively. Comparative baking grades were B+, A, E+, and E+ for Becker, Cardinal, Hart, and Titan, respectively.

No 1987 quality data is yet available.

These and other tests reveal that the milling quality of GR876 is very good while the baking quality of GR876 is acceptable.

(See attached Tables 1-2).

8800121

1986 CROP
WOOSTER, OHIO
ADVANCED VARIETIES
STANDARD = 86002, CALDWELL

Table 1. Wheat, milling, and flour analytical and baking data, and quality scores. Drill plot entries for 7 location composite samples from OARDC/OSU, 1986 crop.

WHEAT AND MILLING DATA

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	TEST WT.	BREAK FLOUR YIELD	ST.GR. FLOUR YIELD	RED. PASSES	FRIABILITY	E.S.I.	MILLABILITY
***	STANDARD	100 A	100 A	100 A	59.6	37.7	76.3	7	29.2	10.9	114.3
***	BENCHMARK	100.2A	105 A	100.2A	61.6	35.6Q	76.3	7	28 Q	10.4	114.1
001 1	BECKER	86.3 D	82.4 E	82.4 E	57.9Q	35.7Q	75.4*	7	27.6Q	11.8	92.6 Q
002 2	CALDWELL	100 A	100 A	100 A	59.6	37.7	76.3	7	29.2	10.9	114.3
003 4	TITAN	89.6 D	69.7 F	69.7 F	60	33.4Q	74.9*	7	27.5Q	11.8	97.5 *
004 6	CARDINAL	102.6A	81.2 E	81.2 E	60.5	31.8Q	77.5	7	29.4	9.3	121.3
005 8	OH 257	93 C	69.7 F	69.7 F	60.7	28.5Q	75.7	7	28.1Q	11	105.6
006 11	OH 265	94.3 C	93.5 C	93.5 C	60.7	36.6	75.8	7	28.7*	11.3	103.3*
007 12	OH 285	98.1 B	81.7 E	81.7 E	60.4	29.8Q	77.4	7	29.7	8.8	114.4
008 13	OH 286	93.9 C	105.7A	93.9 C	58.1Q	39.9	75.6	7	28.6*	11.4	103.8*
009 16	OH 328	99.1 B	78 F	78 F	60.4	30.9Q	77.3	7	29.5	9.4	115.5

1986 CROP
WOOSTER, OHIO
ADVANCED VARIETIES
STANDARD = 86002, CALDWELL

Table 1. (Cont'd.)

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STRAIGHT-GRADE FLOUR

LAB NO.	FLOUR PROTEIN %	ASH %	MICRO AWRC %	COOKIE DIAMETER CM.	TOP GRAIN
***	8.95	.36	52.5	18.3	7
***	8.9	.35	51.3	18.35	7
001	8.66	.43Q	51.8	17.8 Q	7
002	8.95	.36	52.5	18.3	7
003	9.66*	.39*	52.3	17.59Q	6
004	9.61*	.37	49.9	17.73Q	7
005	9.88*	.38*	52.2	17.6 Q	6
006	9.49*	.4 Q	50.8	18.08	6
007	9.42	.42Q	51.8	17.84*	5
008	10.1Q	.39*	48.8	18.31	7
009	10.4Q	.4 Q	50.6	17.75Q	5

1986 CROP

8800121

UNIFORM EASTERN RED NURSERY
STANDARD = 86302, KNOX 62

Table 2. Wheat, milling, and flour analytical and baking data, and quality scores. Uniform Eastern Soft Red Winter Wheat Nursery, 7 location composite samples, 1986 crop.

WHEAT AND MILLING DATA

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	TEST WT.	BREAK FLOUR YIELD	ST.GR. FLOUR YIELD	RED. PASSES	FRIABILITY	E.S.I.	MILLABILITY
***	STANDARD	100 A	100 A	100 A	59.6	33.7	75.2	7	27.6	12.1	98.1
***	BENCHMARK	112 A	110.6A	110.6A	61.6	35.6	76.3	7	28	10.4	114.1
301 1	TRUMBULL	98.4 B	84.1 E	84.1 E	59.8	30 Q	76.1	8	27.3	11.9	97.4
302 2	KNOX 62	100 A	100 A	100 A	59.6	33.7	75.2	7	27.6	12.1	98.1
303 3	OASIS	103.8A	95.2 B	95.2 B	61.1	29.5Q	75.8	7	29	11.7	104.8
304 4	MD 72004	105.6A	102.8A	102.8A	60.5	31.1Q	76	7	28.8	10.8	107.3
305 2	9021L	96.3 B	95 B	95 B	58.9*	30.4Q	74.4	7	28	12	94.8
306 6	IN 76788G2-5-4-7	108.3A	103.3A	103.3A	60.8	33.4	76.3	7	29.2	10.6	109.9
307 7	MOW 10501	101.3A	101.4A	101.3A	61	32.7	75.8	7	28.2	11.7	99.3
308 8	IN 77249RC1-133-2	100.7A	100.8A	100.7A	60.3	32.3	75.6	7	28	11.9	99.3
309 9	ILL 81-3737	105.5A	94.9 C	94.9 C	60.8	29.2Q	76.6	7	28.2	10.8	107.8
310 10	MOW 11138	99.2 B	103 A	99.2 B	59.1	30.5Q	75.9	7	29.2	11.6	99
311 11	MD 55-220-76	105.5A	101.5A	101.5A	61.2	33.2	76.1	7	29	10.5	105.4
312 12	NA SW78-111	96.6 B	95 B	95 B	61.4	30 Q	75.8	7	27 *	11.5	93.2
313 13	ILL 79-1385	102.7A	98.2 B	98.2 B	59.9	29.5Q	77.3	7	28.4	11.3	104.3
314 14	NA SW76-180	102.7A	99.4 B	99.4 B	59.9	33.1	75.5	7	28.5	11.1	102.3
315 15	PS 840026	97.7 B	95.1 B	95.1 B	59.9	30.5Q	75.3	7	27.8	12.6	95.9
316 16	COKER 85-42	105.8A	100 A	100 A	60.5	37	75.7	7	29.9	11.3	104.4
317 17	COKER 83-23 (P9323)	112.5A	105.1A	105.1A	59.7	33.9	77.3	7	30	9.9	117.2
318 18	MD 55-217-63	106.8A	99.2 B	99.2 B	60.1	31.5Q	76.3	7	28.8	10.4	109.3
319 19	KY 83-60	108.1A	96.6 B	96.6 B	60.5	27.1Q	77.4	7	29.8	10	113.3
320 20	COKER 84-33	101.1A	90.7 C	90.7 C	61	29.3Q	75.4	7	29.1	11.5	100.7
321 21	COKER 82-28	100.3A	97 B	97 B	61.1	32.1	75.7	7	28.4	11.6	97.9
322 22	OH 257	99 B	93.7 C	93.7 C	59.8	28.8Q	75.3	7	27.9	11.5	99
323 23	OH 265	104.6A	109.5A	104.6A	60	37.4	76	7	28.9	11.3	102.8
324 24	OH 285	114 A	103.2A	103.2A	60.2	29.8Q	77.4	7	29.7	8.7	123.3
325 25	IL 82-3298	102.8A	94.8 C	94.8 C	61.4	30.6Q	76	7	27.5	11.3	102.6
326 26	IL 82-2986	111.8A	94.8 C	94.8 C	61.4	29.2Q	77.2	7	28.9	10	117.2
327 27	X 1349-10	108.8A	109.2A	108.8A	60.6	37.1	76.4	7	29	10.9	108.9
328 28	NA SW76-261	97 B	90.9 C	90.9 C	58.9*	31.5Q	75.7	7	27.6	11.1	95.4
329 29	AT 42263-8	105.4A	104.6A	104.6A	59.8	35.9	75.3	7	28.5	11.8	105
330 30	AT 74107-F11-4	106.8A	101.3A	101.3A	59.9	30.4Q	76.8	7	28.8	10.8	110.1
331 31	AGC B8 (TRID)	105.4A	105.2A	105.2A	59.5	36.6	75.8	7	28.1	11.4	105
332 32	AGC B9	100.4A	96.3 B	96.3 B	59.5	34.1	75	7	27.4	12.1	98.6

1986 CROP

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UNIFORM EASTERN RED NURSERY Table 2. (Cont'd.)
STANDARD = 86302, KNOX 62

	STRAIGHT-GRADE FLOUR						CAKE PATENT FLOUR							
LAB NO.	PROT. %	ASH %	MICRO AWRC %	COOKIE DIAM. CM.	TOP GRAIN		PROT. %	ASH %	INIT PH	FINAL PH	CHLORINE RESPONSE PH/ML/G	OPT. LIQUID LEVEL	CAKE VOLUME ML.	CAKE SCORE
***	10.9	.39	53	17.52	6		9.8	.28	5.71	4.82	2.827	130	1080	80
***	8.9	.35	51.3	18.35	7		7.65	.27	5.68	4.84	2.83	130	1048	87
301	11.5	.41	53.9	17.27*	6		10.3	.3	5.71	4.82	4.571	130	1001 @	82
302	10.9	.39	53	17.52	6		9.8	.28	5.71	4.82	2.827	130	1080	80
303	11.5	.39	55.2*	17.39	6		10.3	.28	5.77	4.81	2.678	130	1079	82
304	10.1	.39	52	17.5	6		9.07	.28	5.75	4.82	2.864	130	1066	84
305	10.3	.4	53.3	17.3	5		9.44	.27	5.73	4.81	2.841	120	1060	80
306	10.3	.39	53.5	17.81	6		9.24	.25	5.79	4.84	3.017	120	1071	80
307	10.1	.41	52.8	17.76	7		5.13	.3	5.83	4.8	2.618*	130	1041 *	84
308	10.2	.4	53.8	17.34	6		9.11	.29	5.72	4.84	2.718	120	1095	80
309	10.5	.39	54.1	17.3	7		9.4	.3	5.74	4.76	2.838	120	1065	80
310	10.7	.43*	53.2	17.58	6		9.43	.3	5.7	4.77	2.7	130	1084	82
311	10.5	.41	51.5	17.69	7		9.49	.26	5.83	4.76	2.973	130	1044 *	84
312	11	.43*	51.9	17.43	6		9.88	.3	5.74	4.78	2.698	120	1039 *	82
313	10.7	.42*	52.7	17.48	6		9.27	.29	5.83	4.78	2.782	130	1045	84
314	9.65	.4	51.2	17.62	6		8.8	.28	5.75	4.83	2.918	120	1039 *	80
315	10.6	.4	53.1	17.24*	7		9.48	.29	5.78	4.77	2.745	120	1065	80
316	9.58	.41	56.8@	17.45	7		8.48	.29	5.77	4.84	2.844	120	1110	78
317	10.7	.39	51.2	17.71	5		9.66	.26	5.78	4.84	2.91	130	1076	82
318	10.4	.39	51	17.54	7		9.32	.28	5.79	4.82	2.592*	120	1049	80
319	10.9	.41	52.1	17.37	6		9.72	.28	5.75	4.79	2.645	130	1054	82
320	10.7	.41	49.7	17.08*	7		9.66	.28	5.87	4.78	2.59 *	130	1024 *	84
321	10.6	.42*	52.1	17.54	4		9.86	.31	5.83	4.8	2.774	120	1051	80
322	10.6	.4	53.5	17.43	6		9.17	.26	5.88	4.78	3.231	120	1029 *	82
323	9.82	.41	52.5	18	7		8.87	.27	5.73	4.79	3.063	120	1086	80
324	10.4	.37	49.3	17.98	6		9.58	.27	5.77	4.83	2.985	120	1037 *	82
325	9.82	.39	53.3	17.38	7		8.8	.28	5.91	4.82	3.366	130	1019 *	88
326	11.1	.37	51.4	17.65	6		9.96	.27	5.78	4.8	3.008	120	1022 *	80
327	9.42	.39	54.5	17.84	6		8.51	.3	5.78	4.83	3.071	120	1089	88
328	9.88	.43*	52.1	17.07*	5		8.95	.35	5.8	4.8	2.789	130	1015 *	86
329	9.82	.37	53	17.65	6		8.85	.26	5.79	4.83	3.304	120	1080	82
330	10.3	.39	51.8	17.49	6		9.25	.28	5.83	4.83	3.124	120	1065	82
331	9.57	.38	55.4*	17.56	7		8.57	.29	5.78	4.83	3.291	120	1106	84
332	10.5	.38	55.1*	17.18*	5		9.43	.27	5.75	4.82	2.987	120	1088	82

Exhibit E

Statement of the Basis of Applicant's Ownership

The originating complex cross, early line evaluation, selection, reselection, testing, purification, and final multiplication were all performed by the applicant breeder (Dr. H. N. Lafever) with the assistance of technical support personnel on the property of The Ohio State University, Ohio Agricultural Research and Development Center utilizing funds provided for such research. Ownership of the variety shall remain with The Ohio State University, Ohio Agricultural Research and Development Center, however, through The Ohio State University Research Foundation, exclusive rights to produce, promote, and market this variety have been granted, by contract, to the Agricultural Genetic Research Association.